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Issued June 21, 1907.

U. S. DEPARTMENT OF AGRICULTURE.
BUREAU OF PLANT INDUSTRY.

B. T. GALLOWAY, CHIEF OF BUREAU.

MODEL PLAN FOR A SOUTHERN FARM.

GOVERNMENT PRINTING OFFICE : WASHINGTON : 1907

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ILLUSTRATION.

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FIG. 1.—Diagram of a southern farm, showing arrangement of fields and cropping system	2

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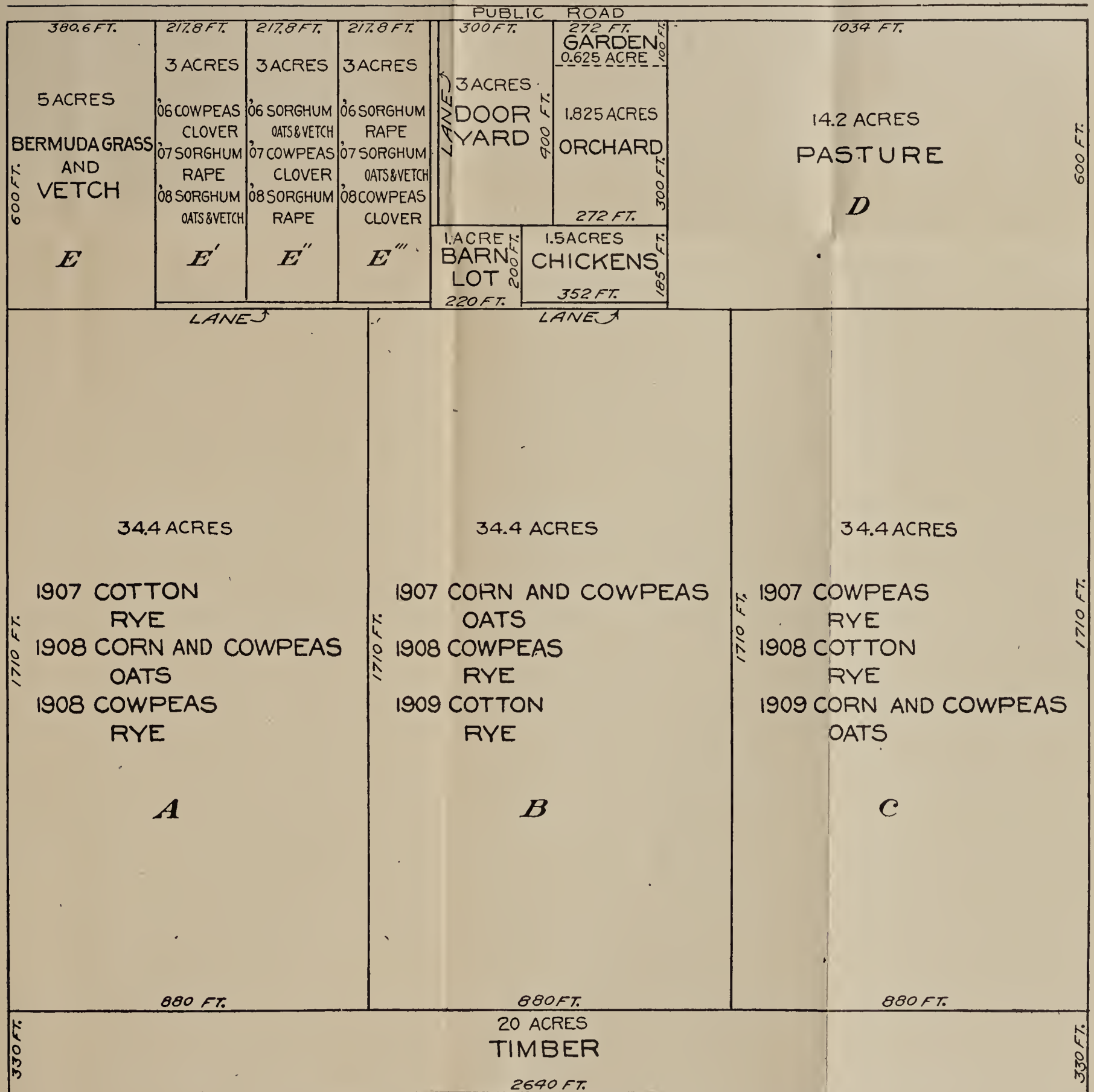


FIG. 1.—Diagram of a southern farm, showing arrangement of fields and cropping system.

MODEL PLAN FOR A SOUTHERN FARM.

This model of 160 acres of land is designed for a combined cotton, hog, and dairy farm.

Eight acres are devoted to the buildings, yards, etc., and 20 acres are in timber. The remainder, consisting of fields A, B, C, D, E, E', E'', and E''', is in cultivation. (Fig. 1.)

CROPPING SYSTEM.

Fields A, B, and C contain 34.4 acres each. The rotation practiced on these three fields follows:

First year, cotton, to be followed by rye for winter pasture. This is planted in the cotton between the first and second pickings. It is advisable to run a light harrow between the rows to cover the rye and aid early germination. In case the land is rather poor it is a good practice to take the stock off the rye about March 1 and allow it to grow to a foot or 18 inches in height; then turn it under as a green manure.

Second year, corn is planted after the rye and cowpeas are added at the last cultivation.

Third year, oats follow the corn and cowpeas as early as possible in the fall, and may be used for either hay or grain in the spring. When these are off, cowpeas are planted. These come off in August for hay and grain.

The most profitable method of handling cowpeas so far known, and one that is practiced in scattered localities throughout the cotton belt, is to cut and cure the peas for hay, after which the vines are passed through some form of pea thrasher.

As soon as the cowpeas are off the ground it should be planted at once to rye or some other suitable winter crop. Care should be taken in seeding winter crops that the seed is planted as early as possible in the fall to insure sufficient growth before frost for pasturage during the winter months.

Field D is a permanent Bermuda grass pasture in which vetches are planted for winter grazing, thus affording green pasture for almost the entire year. To get a stand of vetches in the Bermuda grass sod the land is disked in the early fall and the vetch seed sown at the rate of a bushel per acre, and covered with a smoothing harrow. If the stock is taken off for a few weeks in April and May the vetch will reseed itself. In order to insure the germination of the seed, the field should be disked and harrowed down smoothly in September of each year.

Fields E, E', E'', and E''' are four hog pastures. One 5-acre plot, E, is seeded to Bermuda grass and vetch, as in field D. The other three plots, E', E'', and E''', contain 3 acres each, and are devoted to the following rotation:

	Planted.	Pastured.
First year.....	{ Sorghum May 1 { Oats and vetch ... Sept. 1	June 15 to Sept. 1. Oct. 20 to May 15.
Second year ..	{ Cowpeas..... May 15 { Clover..... Sept. 1	July 1 to Sept. 1. Apr. 1 to July 1.
Third year.....	{ Sorghum July 1 { Rape Nov. 1	Aug. 10 to Nov. 1. Jan. 15 to May 1.

This table shows the rotation of hog pastures in field E, with dates when the various crops may be planted to afford pasture during the year. It also shows the periods when each may be pastured.

YIELDS OF VARIOUS PRODUCTS.

In favorable seasons where the rotation, as laid down for fields A, B, and C, has been practiced for several years on lands well drained and not too sandy, a yield of a bale or more of cotton per acre is to be expected. Under ordinary conditions land that will produce a bale of cotton per acre should yield at least 45 bushels of corn, 12 tons of ensilage, 2 tons of oat hay or 1 ton of cowpea hay, and 12 bushels of grain per acre, as the case may be.

With these yields field A produces 17,200 pounds of lint cotton worth, at 10 cents per pound, \$1,720, and 1,000 pounds of cotton seed per acre, or 34,400 pounds, of which 33,265 pounds are sold at \$15 per ton for \$249.45, making a total of \$1,969.45 for the season. All of the product of this field is sold except 1,135 pounds of cotton seed which is kept for seed.

Field B produces 891 bushels of corn on 19.8 acres and 175.8 tons of ensilage on the remaining 14.6 acres. The stover is not estimated. Everything in the field is fed to stock, the seed for next year being bought.

Field C yields 68.8 tons of oat hay in May and 34.4 tons of cowpea hay and 516 bushels of cowpeas in August. The hay is all fed on the farm, and the cowpeas, with the exception of 51.6 bushels for seed, are sold. Seed oats for the next season are bought.

DISPOSITION OF THE VARIOUS PRODUCTS.

This farm supports 25 milch cows, 12 young stock, 1 bull, 5 horses, 15 brood sows, 90 pigs, and 100 fowls.

Each cow and the bull receives an amount of food equivalent to a daily ration of 35 pounds of corn ensilage, 15 pounds of hay, 3 pounds of corn meal, and 1 pound of cotton-seed meal throughout the year. The young stock are fed the same ration, in quantities proportionate to the size and age of the animal, during the six months of winter, being on pasture the remainder of the year.

The horses are fed 18 pounds of hay and 6 pounds of grain daily throughout the year.

The hogs are on pasture almost all the year, and in addition get 2 per cent of their live weight of grain daily. The brood sows are fed throughout the year, and bring two litters of pigs a year, making 180 that are sold each year, weighing 160 pounds each.

With this arrangement enough hay and ensilage is raised on the farm in ordinary years to meet the requirements. The total quantity of corn consumed, however, is 1,100 bushels more than that raised, and this must be bought, as must also the 5.89 tons of cotton-seed meal necessary to balance the ration.

Farm Statement of

Production—Receipts.

Crop.	Product.	Aeres.	Yield per acre.	Total yield.	Products consumed.
Cotton.....	{Lint	34.4	{500 lbs	17,200 lbs	
	{Seed		{1,000 lbs	34,400 lbs	1,135 lbs
Corn and cowpeas..	{Corn.....	19.8	45 bu	891 bu	891 bu
	{Silage.....	14.6	12 ton.....	175.8 ton.....	175.8 ton.....
Oats	{Hay	34.4	2 ton	68.8 ton.....	68.8 ton.....
	{Hay	34.4	{1 ton	34.4 ton.....	34.4 ton.....
Cowpeas.....	{Grain.....}		{15 bu	516 bu	51.6 bu
Products from live stock:					
Cows..... 25	Butter, 300 lbs. per cow				
Poultry..... 100	Eggs, 10 doz. per hen				
Hogs..... 180	Live weight, 160 lbs. each				
Cows sold yearly, 6 head at \$20					
Total income.....					

Investment:

Land, 160 acres, at \$50	\$8,000
Fences, 103 rods, 26-inch woven wire and 2 barb wires, at 65 cents.	670
Buildings	2,000
Implements and machinery	1,990
Live stock	3,265
Total.....	15,925

Receipts and Expenses.

Production—Receipts.			Expenses.			
Products sold.	Rate.	Value.	Products purchased.	Quantity.	Rate.	Value.
17,200 lbs.	10 ¢ lb.	\$1,720.00				
33,265 lbs.	\$15 ton.	249.45				
.....						
.....						
464.4 bu.	\$1.50 bu.	696.60	Meal	5.89 ton.	\$27 ton.	\$159.00
7,500 lbs.	25 ¢ lb.	1,875.00	Corn	1,100 bu.	60 ¢ bu.	660.00
1,000 doz.	20 ¢ doz.	200.00				
28,800 lbs.	6 ¢ lb.	1,728.00	Seed oats	185 bu.	50 ¢ bu.	92.50
.....		120.00	Labor	5 men.	\$420.	2,100.00
.....			Depreciation	\$1,590	8 per ct.	127.20
			on machinery.			
			Taxes			80.00
			Cotton picking			258.00
.....		6,589.05	Total expenditure			3,476.70
			Net profit			3,112.35

Interest obtained on investment, 19.5 per cent.

From the preceding table it will be seen that the total income from the farm is \$6,589.05, with a total expenditure of \$3,476.70, or a net profit of \$3,112.35, equivalent to 19.5 per cent on the \$15,925 invested.

FARM EQUIPMENT.

Farm land, 160 acres, at \$50	\$8,000.00
Fences, 103 rods, at \$0.65 (26-inch woven wire and 2 barb wires)	670.00
Barn.....	\$1,000.00
Silo, 175 tons.....	200.00
Dairy house.....	400.00
Hog houses	75.00
Poultry house, etc	100.00
Machine shed	50.00
Smokehouse.....	50.00
Well.....	125.00
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Total farm buildings	2,000.00
Disk plows, two, 24-inch disks, at \$40.....	80.00
Disk harrow, 3-horse, 12 disks.....	30.00
Spike-tooth harrow, three sections.....	17.00
Grain drill	55.00
Corn planter, 2-horse	35.00
Cotton planter.....	18.00
Cultivators and attachments, two, at \$30.....	60.00
Corn harvester	125.00
Mower.....	40.00
Rake	18.00
Wagon.....	60.00
Spring wagon	70.00
Manure spreader	125.00
Silage cutter.....	150.00
Gasoline engine, 10-horsepower.....	450.00
Separator turbine.....	250.00
Other dairy equipment.....	100.00
Hay fork, etc.....	32.00
Pea huller.....	250.00
Miscellaneous tools, hoes, forks, etc.....	25.00
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Total farm machinery.....	1,990.00

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Work animals, 5 at \$175.....	\$875. 00	
Milk cows, 25 at \$60	1, 500. 00	
Young stock, 12 at \$20.....	240. 00	
Bull, 1 at \$150.....	150. 00	
Brood sows, 15 at \$25	375. 00	
Boar, 1 at \$50	50. 00	
Poultry, 100 at \$0.75	75. 00	
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Total stock.....		\$3, 265. 00
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Total investment in equipment		15, 925. 00

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